Reviewer's report

Title: A guidance for contact tracing of plane passengers with Viral Haemorrhagic Fever - Results of an expert consultation

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Reviewer: Matthias Borchert

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This is an interesting and relevant paper which attempts to close a gap in the VHF literature: whether, when and how to organise contact tracing after air travel by Lassa, Ebola or Marburg cases.

- Major Compulsory Revisions

1. Discussion, 1st paragraph: The statement I object most strongly to is the statement “no treatment is available for Marburg and Ebola infections”. This is wrong. Marburg and Ebola patients who accept hospital care systematically receive supportive and symptomatic treatment, which alleviates their suffering and may improve their chances for survival. In the only filovirus outbreak where patients received intensive care to the standards of industrialised countries (Marburg HF 1967 in Germany and Yugoslavia), case fatality was much lower than in African filovirus outbreaks (20% vs. 50-90%) – this may have had several reasons, but we can in no way rule out that better, more intensive care improves the patient’s chances for survival. The reason why I object strongly to this statement is that it has caused a lot of damage in the field, because it has undermined the willingness of cases and their relatives to accept hospitalisation and isolation. We should avoid propagating the demonising myth that there is no treatment or cure for Ebola and Marburg HF. It is, however, true that there is no antiviral or causal treatment for EHF/MHF. This is in itself not so unusual – there are many diseases for which causal treatment is not available or not used (e.g. dengue, cholera), and where supportive treatment makes has a considerable on the outcome. For Lassa fever, not only treatment exists, but it includes an antiviral drug, ribavirin. Thus, for Ebola, Marburg and Lassa alike, the “reasons of starting a contact tracing should be to raise awareness and prevent onward transmission” and to initiate optimum care as early as possible.

2. Referencing should be reviewed, as on many occasions, references do not point to the original research papers but to articles citing such research (and occasionally, not even that). For example: in table 1, one reference for the statement “Ebola virus has also been detected in sweat” is the Bausch et al. paper on “Risk factors for Marburg HF”, in which no information on whether or not Ebola virus is contained in sweat can be found. In another example, the statement “nonhuman primates and bats are recognised sources of infection” is referenced by reports on the importation of Marburg cases to the Netherlands and the US, which have, understandably, not added any new information on the
sources of primary transmission of Marburg virus. This is not considered good practice, since it risks perpetuating errors in the literature if the first paper cited the original paper wrongly. I am under the impression that citing secondary literature has occurred on many occasions, so please review thoroughly. By the way: a helpful document to locate original research papers is Kuhn’s book “Filoviruses. A compendium of 40 years of epidemiological, clinical, and laboratory studies”.

3. Table 1: Ebola: “Evidence indicates to bats as one of the reservoir of Ebola [35]. Also contact with primates has been reported in Ebola cases [36, 37]”
Marburg: “The reservoir of Marburg is not known, nonhuman primates and bats are recognised sources of infection”. I do not understand why the authors treat Ebola and Marburg differently with respect to the reservoir to be known or unknown, since for both diseases filovirus has been found in wild bats, which is a strong indication for bats being the reservoir (for Marburg: Towner JS et al, 2009. Isolation of genetically diverse Marburg viruses from Egyptian fruit bats. PLoS Pathog 5: e1000536.) Nonhuman primates, however, are considered widely to be accidental hosts for both filoviruses, given the very high case-fatality of Ebola and Marburg infection in non-human primates.

4. Table 1: Ebola: “Also contact with primates has been reported in Ebola cases [36, 37]”. The list of species who have reportedly been sources of primary includes cephalophus antelopes (Formenty P et al, 2003. L’épidémie de fièvre hémorragique à virus Ebola en Republique du Congo, 2003: une nouvelle stratégie? Med Trop (Mars) 63: 291-295.).

5. Table 1: Ebola: “Big outbreaks have been reported in hospital settings.” Again, it is unclear why Ebola is being treated differently from Marburg: in both major African Marburg outbreaks, transmission has occurred in hospital settings to patients and staff, and in Uige/Angola, nosocomial amplification can even be considered as major driving force of the outbreak. Considerable outbreaks in hospital settings have also occurred for Lassa fever. It is misleading to mention nosocomial transmission/amplification for Ebola only. By the way: “Big” should probably read “Large” – to be discussed with a native English speaker.

- Minor Essential Revisions

1. The paper is well written, but could still profit from careful editing by a native speaker. At times, the syntax is unnecessarily complicated, and there are a few errors as well. Examples: “Often this public pressure influences the decision on public health measures, such as passenger trace back more than the existing evidence” (insert comma after “back”); “evidence for disease transmission but also wider aspect including disease severity…” (replace aspect by aspects); “the severity was not considered as a criteria” (replace criteria by criterion); “However, the airline should be contacted to enquire whether crew members remembered or recorded any incidents on board which might have resulted in potential exposures to crew or passengers and the availability of the passenger manifest while awaiting the laboratory result.” – does this mean that crew members and passengers involved in such incidents should be contacted and their availability
for further investigation assured?

2. Results, Literature review, EHF, 1st paragraph: personal communication by whom?

3. Results, Literature review, EHF, 2nd paragraph: “risk of transmission may increase with transition to later stages of the disease” not only because of rising virus titres, but because of increased virus shedding: patients with fever, headache and muscle ache excrete less body fluid and do so more controllably than patients with vomiting and diarrhoea.

4. Abstract: Instead of “resulting in very little evidence of transmission of VHF during air travel”, write “so that no evidence of transmission of VHF during air travel exists to date.” Instead of “Little evidence has been found for the transmission of VHF in airplanes” write “No evidence has been found …” Transmission may have occurred, but evidence does not exist (as opposed to little evidence exists).

- Discretionary Revisions

1. Title: since this paper deals with Lassa fever, Ebola and Marburg haemorrhagic fever and not with the many other types of HF, the title should be more specific.

2. Disease caused by Lassa virus is usually called Lassa fever, not Lassa haemorrhagic fever. The authors should adhere to this convention since deviating from it might lead to the misunderstanding that their paper deals with haemorrhagic cases of Lassa fever only – and I don’t think that was the authors’ intention.

3. Background, 2nd paragraph: I suggest to add “and has led to secondary transmission in the country of destination only once” so that the complete sentence reads: “Although the air transportation of a passenger suffering from a VHF is rare and has led to secondary transmission in the country of destination only once, the severe potential outcome of the disease and the public perception of its infectiousness result in high public attention, sometimes even panic.” This gives a more accurate idea of the risks involved. The addition refers to the exportation of Ebola HF from Gabon to South Africa, a possible reference would be “Ebola haemorrhagic fever - A summary of the outbreak in Gabon. Wkly Epidemiol Rec 72: 7-8.”

Level of interest: An article of importance in its field

Quality of written English: Needs some language corrections before being published

Statistical review: No, the manuscript does not need to be seen by a statistician.
Declaration of competing interests:

I declare that I have no competing interests.